

RESEARCH ARTICLE

The changing roles of frontline bureaucrats in the digital welfare state: The case of a data dashboard in Rotterdam's Work and Income department

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Abstract

The welfare state is currently undergoing a transition toward data-driven policies, management, and execution. This has important repercussions for frontline bureaucrats in such a “digital welfare state.” So far, impact of data-driven tools on frontline bureaucrats is primarily described in terms of curtailing or enlarging their discretionary space to make decisions. It is unclear, however, how daily work practices and role identities of frontline bureaucrats change in situ and which norms they develop to work with new data tools. In this article, we present an empirical study about the impact of a data dashboard in the Work and Income department of the municipality of Rotterdam. We answer the following research question: Which role identities, work practices, and norms of appropriate behavior of frontline bureaucrats in the social domain are reshaped by the introduction of a data dashboard? We use a multiple methods design consisting of semi-structured interviews, ethnographic observations, and document analysis. Our results reveal two role identities among frontline bureaucrats: (a) the client coach, and (b) the caseload manager. We show that the implementation of the dashboard stimulates a shift from a client coach role identity toward a caseload manager role identity. This shift is contested as it leads to role identity conflicts among frontline bureaucrats with a client coach role. Furthermore, we establish that the accommodation of the institutional void in which the introduction of the dashboard takes place, is centered around three themes of contestation: (a) data quality, (b) quality of service provision, and (c) data representations.

Policy Significance Statement

Policy makers need to realize that the implementation of a dashboard is not just an organizational measure to streamline workflows but that it affects the role identities of frontline bureaucrats on a fundamental level. Our case shows that the implementation of a dashboard triggers diverse reactions among work coaches depending on their perceived role identity. For work coaches with a client coach identity this leads to role identity conflicts because the focus on efficiency of the dashboard interferes with their perceived time for client contact. Furthermore, policy makers need to realize that role identities determine how frontline bureaucrats develop norms of appropriate behavior with regards to data quality, service provision, and data representations.

1. Introduction

In recent years, there has been a transition from a welfare state toward a digital welfare state and this is expected to develop further in the future (Pederson, 2019; Blauw, 2020; Coene et al., 2020; Eurofound, 2020). According to Alston, the rapporteur on extreme poverty to the United Nations (UN), “There is little doubt that the future of welfare will be integrally linked to digitalization and the application of artificial intelligence” (Alston, 2019, p. 21). The emergence of a digital welfare state has sparked debate how to appraise the increasing role of data in decision-making.

On the one hand, so-called dataists are convinced that decision-making about the allocation of public services should be based on large data sets and the use of algorithms rather than individual human judgments, therewith assuming that, potentially, weak spots of human judgments, such as personal prejudice will be remedied (Pederson, 2019). There is, furthermore, a strong assumption that the use of data tools will improve service provisions to citizens and result in more efficiency. Dataism is based on positivistic approaches that argue that data, when analyzed in objective ways translate the complexities of the real world into rational and ordered forms of knowledge (Iliadis and Russo, 2016; Kitchin and McArdle, 2016).

On the other hand, relationshipists argue that decision-making about services for citizens should be based on the logic of trust-based relationships between frontline bureaucrats and citizens. In line with critical data scholars, relationshipists problematize the objectivity of data (Iliadis and Russo, 2016). They argue that dataism is too closely aligned with positivist neo-liberal thinking and therefore prone to a naïve instrumental rationality and open to manipulation by vested interests (Kitchin et al., 2015; Kitchin and McArdle, 2016). Relationshipists warn, moreover, that the data transition is not without risks. Badly designed data tools privilege certain groups of people and discriminate others and already disadvantaged groups are subject to more control and surveillance than before (Pleace, 2007; Maki, 2011; Wachter-Boettcher, 2017; Eubanks, 2018). Alston warns that the “digital welfare state” should move away from “obsessing about fraud, cost savings, sanctions, and market-driven definitions of efficiency” if it does not want to become a dystopia of control and punishment (2019, p. 1). Nevertheless, according to Pederson (2019) it is likely that the dataism model will outcompete the relationshipism model eventually.

We examine the contending claims about data producing better service provisions on the one hand and increased control and efficiency on the other hand, in the context of the decentralization of social policy in Dutch municipalities in 2015. The economic crisis in 2008 affected government finances in the Netherlands to a greater extent than foreseen and since 2010 successive governments have implemented austerity measures to prevent the annual deficit to rise. In 2015, the central government decentralized and reformed social policy in order to create a smaller, service-oriented government. The austerity politics of this decentralization came with a strong pressure for Dutch municipalities to provide services more efficiently. This has led to many experiments with the use of data warehouses, dashboards, and predictive analytics in the local social domain, assuming, in line with the neoliberal idea of “doing more with less,” that this would decrease costs and make the municipal administration more manageable (Government of the Netherlands, n.d.; Janssen and Estevez, 2013; Weske et al., 2014; Van Zoonen, 2019; Hastings and Gannon, 2021). These experiments have happened almost entirely outside the public and political eye, and thus without democratic control. Moreover, they take place in an “institutional void” in which there are no generally accepted rules and norms according to which policy making and politics is to be conducted. In the absence of clear guidelines, a variety of actors negotiate new norms of appropriate behavior (Hajer, 2003).

In this article, we research how frontline bureaucrats develop new role identities and norms of appropriate behavior around the use of data tools. We define frontline bureaucrats as civil servants that work daily in the field with the wider public in service delivery (Falanga, 2019). So far, impact of data-driven tools on frontline bureaucrats is primarily described in terms of curtailing or enlarging their discretionary space to make decisions (Buffat, 2015; Giest and Raaphorst, 2018). It is unclear, however, how daily work practices and role identities of frontline bureaucrats change in situ and which norms they develop to work with new data tools. By bringing in literature on role identities into the study of frontline

bureaucrats we can investigate in more detail how new data tools are adopted in practice and how frontline bureaucrats reconfigure their role identity and develop norms with regards to data use (Prasad, 1993; Prasad and Prasad, 1994; Gopal and Prasad, 2000; Zetka, 2001; Barrett et al., 2012; Lifshitz-Assaf, 2018; Goto, 2021). As literature on changing role identities and professions shows, the implementation of data tools can potentially lead to role conflicts between managers and frontline bureaucrats because the latter feel that data-driven tools have nothing to do with the core business of their profession (Christin, 2017; Doove and Otten, 2018; Breit et al., 2019; Jarrahi et al., 2021). Some studies even warn that the use of data-driven tools can be harmful to professions as some professions decrease or even disappear (Goto, 2021). Our research examines three related aspects of how frontline bureaucrats in the department of Work and Income of the municipality of Rotterdam work with data-driven tools: (a) role identities of frontline bureaucrats, (b) their work practices, and (c) the development of norms of appropriate behavior around the use of data. Based on a qualitative case study, we answer the following research question:

Which role identities, work practices, and norms of appropriate behavior of frontline bureaucrats in the social domain are reshaped by the introduction of a data dashboard?

This article is organized in five sections. In [Section 2](#), we discuss existing relevant research about the influence of the use of data-driven tools on the work of frontline bureaucrats. [Section 3](#) describes the implementation of the dashboard. [Section 4](#) describes the research design, data collection, and analysis. [Section 5](#) presents the empirical analysis of the change of work practices and role identity, and the three themes of contestation concerning the norms of appropriate behavior around the use of the dashboard. [Section 6](#) contains a short summary of the findings and a critical discussion.

2. Theoretical Framework

Research about the impact of data-driven work on frontline bureaucrats has examined three dimensions: changing work practices, changes in discretion, and changing role identities. However, how these dimensions interrelate is less clear from the literature. Below, we will first describe existing findings with regards to the impact of data-driven work on work practices, discretion, and role identities. We will then point out the interconnection between these dimensions for the purpose of our study and argue that currently there is an institutional void with regards to norm development.

2.1. Work practices

Work practices of frontline bureaucrats can be defined as “what they do” on a daily basis (Reay et al., 2017 in Goto, 2021). Work practices are relevant to study up close because earlier research indicates that the use of data-driven tools influences work practices in different ways. Work practices can indicate whether frontline bureaucrats are reconfiguring their role identity and adopting a certain data-driven tool or not. Their daily behavior, as portrayed in work practices, moreover, gives an indication of their attitude toward data-driven tools. Studies that focus on daily work practices that frontline bureaucrats develop when confronted with new data tools have indicated that they develop buffering strategies to minimize the impact of data-driven tools on their daily work, for example, foot-dragging, gaming, open critique, resistance, not adjusting working methods, noise reduction, and client upbringing (Tummers and Rocco, 2015; De Witte et al., 2016; Christin, 2017; Doove and Otten, 2018; Veale et al., 2018; Breit et al., 2019, 2021; Flügge et al., 2021). Especially buffering strategies can indicate that frontline bureaucrats experience role conflicts because of the implementation of a data-driven tool.

2.2. Discretion

Various studies have analyzed the effect of data-driven tools on the discretion of frontline bureaucrats (Bovens and Zouridis, 2002; Hupe and Hill, 2007; Busch and Henriksen, 2018). There is much research that supports a curtailment thesis by showing how frontline discretion decreases or disappears in the case of large-scale organizational transitions toward data-driven work. It has also been found that data-driven

tools are currently unable to grasp the full complexity of the choices frontline bureaucrats make and the information in digital systems rarely seem to add value to their daily work. It, for example, takes up time for training and handling the system (Giest and Raaphorst, 2018). Other research, however, has supported an enablement thesis by showing how the processing of routine information can be automated, which frees up time for more personalized interaction of frontline bureaucrats with citizens (Giest and Raaphorst, 2018). Finally, there is research that finds both constraining and enabling effects on the ability of frontline bureaucrats to exercise discretion (Buffat, 2015; Giest and Raaphorst, 2018), depending on contextual factors such as the degree of social complexity in a case, skills possessed by frontline bureaucrats, and the need for face-to-face contact (Jorna and Wagenaar, 2007; Busch, 2017). In addition, administrative cultures, dominant social norms, and interpretations have influence on the process in which an organization rearranges its working routines around the use of data-driven tools (Meijer et al., 2021).

2.3. *Role identity*

With work practices and discretion changing due to the introduction of data-driven work, it is likely that the way frontline bureaucrats see their own role as professionals will alter too. Such role identity pertains to “the way that professionals see themselves in terms of who they are and what they do” (Reay et al., 2017 in Goto, 2021). It entails different aspects among which the content of work, acquired knowledge, expertise, competencies, or technical skills, but also shared norms and values about appropriate professional behavior as expressed in modes of doing, speaking, and dressing (Wilensky, 1964; Noordegraaf, 2007).

Research has shown that the role identity of frontline bureaucrats contains a strong and deeply ingrained focus on helping citizens, establishing good relations with citizens, and creating good service provisions (Tummers and Rocco, 2015; Zacka, 2017; Breit et al., 2019; Trappenburg et al., 2020; Engbersen, 2021; Fenger and Homburg, 2021). At the same time, frontline bureaucrats need to provide good service provision within certain institutional boundaries and policy frameworks. Because street-level bureaucrats are positioned between the system world as represented by policies and the lifeworld of citizens, they need to balance multiple sometimes conflicting demands. On the one hand they are state agents that are responsible for the lawful execution of the rules and procedures. On the other hand, they are citizen agents that deal with the needs and wishes of citizens and the possible consequences of the procedures for the situation of the citizen. By using their discretionary space, they can balance demands from both the lifeworld and system world. Role conflict seems embedded in the position of frontline bureaucrats, who, as the “frontline” metaphor suggests function as liaisons between large (public sector) organizations and citizens (Habermas, 1984, 1987; Maynard-Moody and Musheno, 2000; Schell-Kiehl and Slots, 2014; Zacka, 2017; Movisie, 2019; Veldboer, 2019; Tier et al., 2021). In addition, role conflict can also emerge when expectations are incomplete or insufficient to guide behavior or when there is incongruence between expectations and personal characteristics (Biddle, 1986, p. 83; Jarrahi et al., 2021; Mascini and Doornbos, 2021).

The introduction of data-driven tools intervenes in the delicate balance frontline bureaucrats have to establish in their daily work (Lifshitz-Assaf, 2018, in Goto, 2021). Not only does it change the relationship with managers (Reay et al., 2017, in Goto, 2021), but their skills sets and norms regarding data and data tools need to be adjusted as well (Ben and Schuppan, 2014; Hill et al., 2014; Schuppan, 2014; Susskind and Susskind, 2015). Work practices like buffering strategies indicate silent opposition as well as open disagreement about the development of norms around the use of data.

2.4. *Institutional void*

When looking at the interconnections of the above described findings, we notice a rather complex picture of both enabling and disabling effects of the introduction of data-driven tools in the work of frontline bureaucrats. This concerns the complete disappearance of some sorts of work, as well as changing position from “the street” to “the screen” (Bovens and Zouridis, 2002). There is a possible diminishment

of discretion with some research strongly indicating the contextual contingencies of these effects. Unmistakably new data tools intervene in the role identities of frontline bureaucrats, as they necessitate the acquisition of new skills and a reconfiguration of the balance between the needs of the organization and those of citizens. On top of this, the use of data and data tools themselves require new operational norms and values, for which the public sector and municipalities follow the GDPR and general quality guidelines, but for which there are, as yet few concrete do's and don'ts (van Zoonen, 2019; van Zoonen, 2020).

All of this “transition work” needs to be done without much policy direction, neither from national nor from local politics and policy makers. We described this situation earlier as an “institutional void”, following Hajer's (2003) identification of the lack of policy and democratic guidelines for new political issues, such as climate change, digital technologies or (big) data. In the absence of clear guidelines, a variety of actors negotiate new norms of appropriate behavior. While Hajer claimed a new and productive balance between the state and civil society in policy making, subsequent authors working with the concept have claimed that the result, instead is poor policy and decision-making (cf. Leong, 2017). Regardless of the enhanced or decreased quality of policy and decision-making, Bierregaard and Klitmore (2010) show how the formation of new rules, codes and conventions within a public sector organization undergoing reform comes from the everyday practices and adaptations of frontline bureaucrats.

3. Case Description

We studied the implementation and use of a dashboard for the M&A teams (People- and Labor Development), at the department of Work and Income of the municipality of Rotterdam. The city of Rotterdam has the highest number of unemployed benefit recipients, hereafter called clients, in the Netherlands and the main goal of the M&A teams is to help them back to work. The ambition of the Mayor and Aldermen is to decrease the number of clients to 30,000 at the end of 2021 but due to the corona crisis they had to adjust their goals (Gemeente Rotterdam, 2019, 2020a, b).

Three interconnected data dashboards for the M&A teams were introduced in 2021 as part of a broader transition toward data-driven work. The municipality of Rotterdam started their digital transformation to deal with the pressures to provide services more efficiently that resulted from the decentralization of social policy in 2015. As part of their digitalization agenda an extensive data program was launched in 2018 called “Program Data-driven Work: Data, not words” (Gemeente Rotterdam, 2017).¹ One of the goals was to set up data management systems so that the data quality is guaranteed, monitored, and improved (Veen, 2018).

In line with the efficiency promise “doing more with less” of data-driven work, the expectation is that by using the dashboard the service provision can be improved and that more clients will find a job. The process manager implemented three interconnected dashboards: the team management dashboard, the quality officer's dashboard, and the work coach dashboard. Even though the dashboard for work coaches has a less visual interface than the other two interconnected dashboards, we focus our investigations on the dashboard for the work coaches because this dashboard is central in the daily work of both work coaches to plan their caseload and team managers who use the dashboard as a monitoring tool.

The information displayed in the dashboards is entered through the main registration database. Figure 1 shows the dashboard with on the left an overview of the caseload, next to that the characteristics of the caseload (age, gender, marital status, etc.), then monitoring details (contact with client, CV, physical and/or mental problems, etc.), and on the right the legenda with definitions.

There are two main ways frontline bureaucrats, in our case work coaches, can use the dashboard: (a) for insight in and control over their caseload, and (b) for matching workshops and vacancies with clients. To explain these two uses we will first describe the path of the client from intake to finding a job. After filling in an online form, a client gets an intake meeting and is then directed to a work coach in a M&A-team. The

¹ Referring to the slogan of the football club Feyenoord in Rotterdam: “Deeds, not words” (Jillissen, 2020).

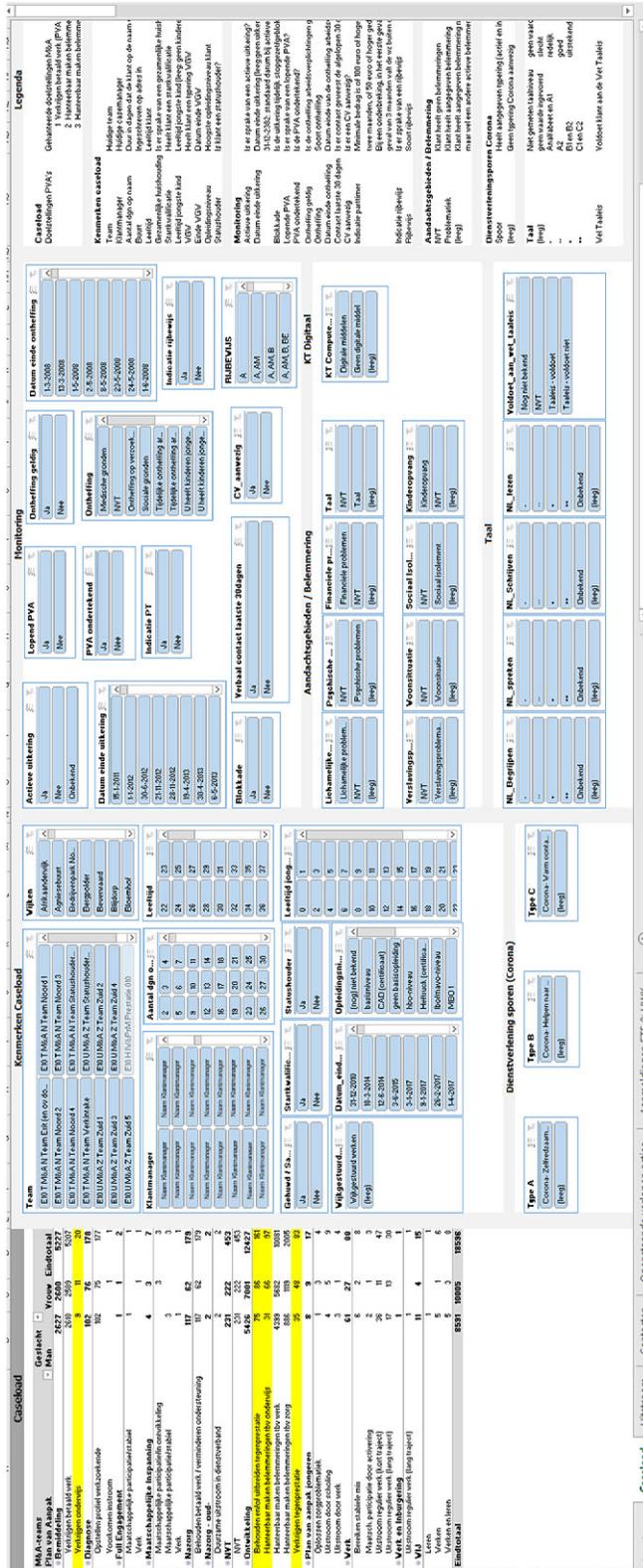


Figure 1. Dashboard.

work coach gathers personal information through an online questionnaire and an initial conversation about gender, age, physical and/or mental problems, and education level, and so forth. Based on this information the work coach decides what the plan of action will be, what service track the client will fall into, and what the contact frequency will be. If a person has a bigger distance from the labor market workshops can be followed to improve their situation. If someone is job ready the work coach tries to match them with a job.

The first way work coaches can use the dashboard is to get insight in their caseload and prioritize and structure their work accordingly. Work coaches can use filters to track the progress of the client and see if any information is missing, like a plan of action or a CV, but also what the last moment of contact was with the work coach.

The second way work coaches can use the dashboard is to match them with workshops and, as soon as they are job ready, with vacancies. For example, if in a vacancy a driver's license is asked, the work coach can select all the people with a driver's license in their caseload and send them the vacancy.

4. Methods

4.1. Research design and data collection

We studied the introduction of a data dashboard in the department of Work and Income at the municipality of Rotterdam. We followed 12 M&A teams, of which nine teams focused on standard clients and three were specialized (focused on asylum seekers, ex-convicts, and multiproblem clients), that each comprised a team manager, a quality officer, and work coaches. Within each M&A team, a smaller "Data-driven improvement team" was installed that needs to transfer knowledge on how to work with the dashboard to their team and to pick up signals from their team to improve the dashboard. We used a qualitative multiple method design consisting of semi-structured interviews, ethnographic observations, and document analysis. Data collection took place in September and October 2021.

We conducted 34 semi-structured interviews with actors who were directly involved with the implementation of the dashboard: 16 work coaches, 8 team managers, and 10 quality officers. The interviews explored particular topics in more depth for example how they perceive their own role in the context of the recent implementation of the dashboard, how the use of the dashboard influences their daily work, what they consider responsible use of the data dashboard, if the data in the dashboard reflect their understanding of reality, and if the data in the dashboard say something about the quality of the services they provide. All interviews lasted around 60 min and were recorded and transcribed ad verbatim. We asked permission for the interviews, the use of quotes, and anonymized the material.

In addition, we conducted seven observations (approximately 9 hr) of meetings such as workshops for work coaches, team meetings, and key-user review meetings. The observations lasted between 30 and 180 min and were translated into fieldnotes. Relevant parts of observations were recorded and transcribed ad verbatim. At the start of an observation the researcher was introduced, the research explained, and participants were asked for consent.

Lastly, we conducted an analysis of documents such as the year plan, newsletters to inform the management team, and policy documents. This resulted in around 129 pages related to the implementation of the dashboard.

4.2. Data analysis

In a first round of open coding, we coded recurring themes in the data with ATLAS.ti. During a second round of axial coding the codes were organized, linked, and grouped into analytical categories. The analysis had an inductive approach because it involved an iterative to-and-from between analytical themes and theoretical concepts. Initially we started off with sensitizing concepts. Throughout the analysis certain concepts and themes were identified and refined (Neuman, 2014).

In the first round of coding, we used "role identity" as a sensitizing concept to interpret the data theoretically while keeping an open mind to new, emerging types of role identities. Initially we created

codes like “changing role work coaches” and “perceived role work coaches,” that we put in the category “role identity work coaches.” Later we redefined codes about the role identity of work coaches in two codes: “the client coach” and “the caseload manager” because these two broad categories of role identities among work coaches emerged inductively from the data. Given the lack of official guidelines in the social domain, we were particularly interested if work coaches, managers, and quality officers developed norms themselves in their daily practice with regards to what they perceive as “appropriate” use of the dashboard. The three themes of contestation concerning norms of appropriate behavior around the use of the dashboard, which the accommodation of the institutional void is centered around, emerged inductively from the data. In the first round of coding, we assigned codes to tensions and discussion points regarding the use of the dashboard, such as “tension administrative pressure versus contact frequency with client,” “tension high caseload versus personal attention,” “focus on data decreases quality of service provision,” “data and reality,” “interpretation of data,” “story behind the data,” and so forth. Based on these discussion points we were able to distinguish three themes of contestation concerning norms of appropriate behavior around the use of the dashboard: “data quality,” “quality of service provision,” and “data representations.” Due to the ongoing development of the dashboard, these norms are not set in stone and are still evolving. The “institutional void” is not “filled” yet since actors like work coaches, managers, and quality officers are still “negotiating” or discussing new norms of appropriate behavior around the use of the dashboard.

We used several strategies to ensure the data quality.

Through method triangulation we crosschecked the information from interviews, observations, and documents. If there were any contradicting facts, we asked the process manager for clarification.

We used data triangulation by crosschecking the information we got in the interviews by interviewing people in different roles, like team managers, quality officers, and work coaches. This allowed us to complement and contrast positive views about the dashboard by actors involved in its implementation, with more critical views of the dashboard among actors that were less involved in the implementation phase.

Through researcher triangulation we ensured that key themes emerging from the analysis were discussed and further refined. The first author collected the data, and the data were discussed and refined in conversations with the other authors.

Furthermore, we incorporated a member check by sending the transcripts to respondents to check if the information was correct, and we incorporated an expert check by presenting the results at four different occasions to experts to get feedback.

It is important to note that the transferability of this research is limited because of the specificity of the case. The research was conducted during the implementation phase of the dashboard, a unique period in a project’s lifecycle, during the COVID-19 pandemic, in a Dutch city with the Netherlands’ highest number of unemployed benefit recipients. The unique circumstances and specific characteristics of this case influences the results. On the one hand there are more unemployed people due to the COVID-19 crisis which translates into higher caseloads and higher work pressure. On the other hand, the COVID-19 crisis created a window of opportunity to implement the dashboard because of the increase in use of digital tools during the pandemic. Despite the specificity of the case, it is possible to inferentially generalize some findings to similar cases, with caution, due to the thick descriptions made. Moreover, theoretical generalizability is more likely because more generic results are transferable to other contexts (Flick, 2018; Mortelmans, 2020).

5. Results

We will first present two broad categories of role identities among work coaches (the frontline bureaucrats in this case) and explain why work coaches are likely or unlikely to work with the dashboard. Second, we will show how and why the implementation of the dashboard leads to conflicts about the role identity of work coaches. In the last part, we show how the accommodation of the institutional void in which the introduction of the dashboard takes place, is centered around three themes of contestation concerning the

norms of appropriate behavior around the use of the dashboard (a) data quality, (b) quality of service provision, and (c) data representations.

5.1. Change in role identity

Based on our interviews and observations, we can distinguish two broad role identities among work coaches: (a) the client coach, and (b) the caseload manager. These should not be seen as mutually exclusive but rather as ends on a dimension that reflects the professional's orientation on the organization on the one end, and on the client on the other, as [Figure 2](#) shows. A small group of work coaches who are actively involved in the implementation of the dashboard have a caseload manager identity. Most work coaches who are not actively involved in the implementation of the dashboard have a client coach identity.

5.1.1. The client coach

Work coaches that perceive their primary role as “client coach” view personal contact with clients and good service provision as their core business, and as the main aspect of their role identity. They focus on helping the individual person in-depth instead of helping as many people as possible. They are caregivers in the sense that they want to help people with their process. If the service provision question is not articulated clearly yet, the work coach helps the client to figure out what they need to get back to work.

Some can work with the dashboard and see it as an advantage. Others don't see it as an advantage. And they may also not be able to learn how to use the dashboard. That doesn't say anything about whether they are a good work coach. Not at all. But they just think it's less important. They're like, I'm doing my job. I'm having my conversations. I am there for the clients, and I do everything to make sure they find a job. (Quality officer)

Some are very focused on the number of people that return to work and others much more on providing service provision. Especially those who focus more on service provision care much less about the numbers. They rely on the contact they have with people. (Team manager)

Work coaches with a client coach role identity are unlikely to appreciate and work frequently with the dashboard because they do not see the advantage for the client. We found this especially among the work coaches in the specialized teams that focus on asylum seekers, ex-convicts, and multiproblem clients. Some respondents perceive working with the dashboard as “mass production” that is particularly detrimental for clients that require more personal attention. These attitudes explain why the specialized teams started at a very late stage with working the dashboard or not at all because they did not see the benefits of the dashboard.

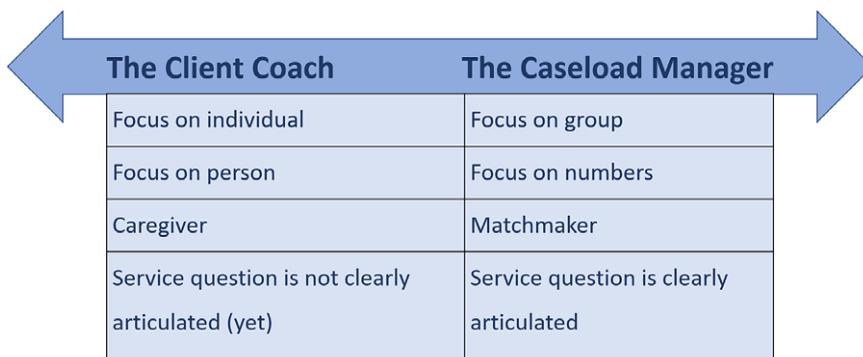


Figure 2. *The client coach and the caseload manager.*

Although only a small minority of work coaches with the client coach identity refuse to work with the dashboard, others do not report very active use. They execute tasks, for example making the data complete, that the team manager or quality officer gives them out of a sense of duty but do not take any initiative themselves to check if all information is complete or to get insight in their caseload. As a result, they register minimal or no information at all due to other work pressures that they feel need precedence. From our interviews with quality officers it appeared that they noticed that some information is contradictory, incomplete, or incorrect within a file. Some work coaches do not know the exact definition of the terms used in the dashboard and therefore register incorrectly.

During the interviews, most respondents that identified with the client role had difficulty describing concrete examples of how the dashboard contributes to the improvement of service provision. An advantage most respondents agree on is that the dashboard makes sure that clients will not be forgotten because work coaches can filter in their dashboard which clients they have not seen for longer than 3 months and contact them. Some work coaches argue that clients might also be earlier on the radar for a vacancy. But they also feel that they lack the capacities (mainly analytical insight) and digital skills to work with the dashboard yet. This is also acknowledged by some of the work coaches:

But I would have given myself, when it comes to capacities, I would have given myself a 6 out of 10.
(Work coach)

5.1.2. The caseload manager

Work coaches with a “caseload manager” identity are more likely to use the dashboard. Personal contact with client is important to them but they are more focused on the group than on the individual. They want to help as many people as possible. They thrive when they have oversight and they enjoy planning, structuring, and prioritizing their work. They feel comfortable managing their own caseload. Keeping track of the numbers in the dashboard gives them a feeling of control. One of the work coaches said:

I have to say that I’m very structured, so that’s why I like the dashboard, because yes, I just like keeping track of all the numbers and keeping everything tidy and working with my to-do list, and with my mail. So, I am very much, yes, administratively I am strong, and I also really enjoy doing that.
(Work coach)

These work coaches function best when the client knows what he wants, and this can be matched with the relevant information in the dashboard. When they get a vacancy, they filter the dashboard for potential candidates.

When it comes to job vacancies, I can switch faster. When I see a vacancy for production work, I can immediately see which people I should select, often the men with heavy production work, with a lower education. And you can usually sign them up for the vacancy. And you can select by age.
(Work coach)

Nevertheless, some work coaches say that the information in the dashboard is still too limited to make a good selection for most vacancies because they miss information about work experience, the kind of education, or preferences for certain jobs or branches, skills, capacities, and so forth. Some of this information is available in the online questionnaire but must be registered manually in the main registration database. This information in the main registration database is not transferred to the dashboard automatically. Work coaches must manually go through files in the main registration database to find this information. They do not always have time to do this due to the high caseloads and work pressure.

They are motivated to work with the dashboard because they recognized the relation between the input and the output of the dashboard. They see the benefits of the dashboard for organizing their own work as well as for the client. Therefore, they feel more motivated to maintain and improve the quality of the data.

If you add it all up, then the job seeker will of course also benefit from this, because of course we are getting better—It also depends very much on how we fill in our systems, we are of course putting more emphasis on it if your work is data-driven, then the data must of course also be correct and good, complete and registered. And in the end the job seeker will benefit from this, maybe they can find a job faster.

(Work coach)

5.1.3. *Role identity conflict*

With the implementation of the dashboard, tasks with regards to case management that were previously conducted by team managers are increasingly distributed to work coaches. Having an overview of the total caseload of the team and structuring and prioritizing work have now become tasks that are increasingly seen as part of frontline work. Work coaches are expected to become the director of their own caseload, approach their caseload strategically, plan their work accordingly, and take a more proactive attitude instead of a reactive attitude. This control over- and insight in their own caseload (data) is in line with the digitalization agenda of the municipality toward data-driven work. The dashboard has an enabling role because it is a tool that helps work coaches with a caseload manager identity to deal with their new tasks. The dashboard can analyze data and give an overview of the caseload. This was not possible in the main registration base where finding specific information must be done manually.

Hence, the implementation of the dashboard stimulates a shift from a “client coach” role identity toward a “caseload manager” role identity. However, this shift is only partly happening. For work coaches with a caseload manager role identity this generally is a smooth role transition because the new tasks fit in with their perceived role identity. They do not resist this shift. However, this imposed shift does lead to role conflicts for work coaches that identify with the role of client coach because the new tasks do not fit in with their role identity. Work coaches with a client coach identity resist or try to evade this shift. Quality officers and managers recognize this clearly:

Only how do you get them to get that insight, then you also have to be a very good planner. And the team members are mainly emotional people from whom we now suddenly expect that they will view their work very business-like, and work very systematically.

(Quality officer)

Resistance among these client coaches especially arises when working with the dashboard comes at the expense of personal contact with clients. Work coaches say that this is increasingly the case because since the implementation of the dashboard the ratio is on average 70/80% administrative tasks related to the dashboard and 20/30% personal contact with clients. As a result, they worry that clients get less personal attention. This was especially important to them because in a recent evaluation about the service provision clients indicated that personal attention is important to them. This conflicts with their role identity because personal contact with clients is their core business and the main aspect of their role identity. Their solution is to postpone administrative tasks, only register the bare minimum, or do not register at all to carve out some more time for personal contact.

Resistance and role conflicts are further magnified by perceived work pressure that is caused by high caseloads and the distribution of organizational tasks to work coaches. Current caseloads are around 120 people per work coach. Most work coaches said this is too high to know the people in your caseload well and help them properly. A caseload of 80 is considered do-able. Because of this high caseload, quality officers and team managers stated that most work coaches are in a “survival mode.” Some work coaches say that they try to deal with the work pressure by helping clients that are job ready first because they require less time. Others mention that they mostly pay attention to the clients that actively seek contact and pay less attention to less vocal and visible clients.

Managers and quality officers, however, are generally convinced that the dashboard offers better solutions than those. Or as the process managers calls it “Work smarter, not harder!” The idea is that the dashboard can help you work more efficient and thereby lower your caseload.

However, work coaches with a client coach identity argue that the dashboard is not always useful because working with human beings does not always allow for planning in advance because there are always urgent things that demand attention. One of the quality officers said:

Of course, there are always several things, signals that go off for things that demand attention, those are of course phone calls from clients, the conversations that have to take place, the administration that has to be done after those conversations, e-mails of course that clients send, and tasks on the action list. Those are several points that simply always have priority for work coaches. (Quality officer)

While managers argue that the dashboard is a solution to solve the problem of high caseloads and work pressure, work coaches with a client coach identity experience the dashboard as an extra administrative burden that distracts from their core business of personal contact with clients.

5.2. *Filling the institutional void*

An important assumption behind data-driven work, of which the dashboard for the M&A teams is a part, is that it will enhance the quality of everyday procedures and practices, and make service provision more efficient. However, the concept of “institutional void” suggests that the organization and its professionals need to establish how exactly these improvements will be realized and turned into new procedures, routines, and norms of appropriate behavior around the use of the dashboard; with the question open as to whether this will really provide better decision-making. This is a discussion that the team managers, quality officers and work coaches we followed, also actively engaged in. As we conducted our study at the very first steps of the usage of the dashboard, this discussion about norms of appropriate behavior around the use of the dashboard is far from over and neither has the dashboard become part of standard practice yet. In other words: the “institutional void” is not “filled” yet. Nevertheless, it has become clear that the main and overlapping themes of contestation concerning the norms of appropriate behavior around the use of the dashboard are (a) data quality, (b) quality of service provision, and (c) the overall meaning of data representations.

5.2.1. *Data quality*

The process manager and team managers emphasize that the quality of the data needs to be good because incomplete and incorrect data will make the dashboard a less effective tool. Every week they send the work coaches a list with data missing in the dashboard. Work coaches that have a caseload manager role identity are more committed to ensure good data quality because it fits in with their role identity. They do not experience the lists and the dashboard as a management tool to control their work but more as a tool that could help them organize their work efficiently. They also experience the monthly conversations with their team manager as a conversation focused on development and improvement instead of control and punishment. It does, however, lead to role conflict among other work coaches whose role identity tends toward a client coach identity because they feel that the requirements of data quality negatively affect their relationship with clients. In response to this trade-off, some work coaches try to balance the need for good data quality and need for client contact. For example, one of the work coaches reported that the first meeting with a new client is about ticking all the boxes the dashboard needs. This also includes information that is according to work coaches not always useful or necessary to help a specific client. Only in the second meeting there is time to really get to know the client and their needs. Some work coaches say they do this to avoid being named on the weekly list of incomplete data. Even though the initial fear of work coaches with a client coach identity that the dashboard was solely a management tool to control their work largely faded, they still try to avoid being named on the weekly list of incomplete data sets. This shows that work coaches alter their work routines due to new performance criteria and the visibility of not meeting criteria in the eyes of peers and superiors. We see a similar notion of “working for the data” in retail where tasks become data-satisfying rather than people-focused. Strong customer

relationships or service are praised but are not a part of formal evaluation or appraisal because it is difficult to capture by data (Evans and Kitchin, 2018).

5.2.2. *Service provision*

The discussion about data quality feed into wider reflections on the fact that data quality is not the same as quality of the service provision. Especially quality officers and work coaches with a client coach identity emphasize that even if all the data are complete and correct it does not necessarily say anything about the quality of the service provision. This is illustrated by the following quote:

I don't doubt those numbers. But do they really represent the quality of the work that someone delivers? Because you can of course enter the number of contacts you had, but how did that conversation go? I'm always curious about how that conversation went with the client. But then I think if you have contact about education and you write yes, I asked that question about education: do you want education? Yes. Full stop in the dashboard. Then I think you talked about education and yes, it is a hot item, and the Alderman wants to know all about that, but has someone felt heard and has he told his story? Or do you really know something more about it? Yes, that remains a tension for me. (Team manager)

This quote illustrates the tension a team manager experiences about what the dashboard measures and what it leaves out. The manager acknowledges that, even though the dashboard gives insight in the number of conversations about education, it is unclear if a service is provided in the sense of personal contact and how the client experienced this. This remains unclear because the quality of service provision is difficult to capture in the dashboard.

5.2.3. *Data representations*

In combination, the conversations and questions about the quality of data and service provision, produce a much wider reflection on the nature of data as representations of the reality of clients. While this is not a discussion that is framed in these terms, it does speak from concrete frustrations that some team managers, quality officers, and work coaches have. We note that only a small minority of respondents are engaged in discussions about representational issues.

A problem that some of them identify and recognize, is that the dashboard gives an incomplete representation of reality because some groups are more visible than others. This is the result of the dashboard missing certain relevant characteristics of the client, for example information about work experience, the kind of education, or preferences for certain jobs or branches, skills, capacities, and so forth. A potential consequence is that more visible groups could get better service provision than invisible groups. One of the work coaches says that single mothers with young children are a visible group that gets plenty of help but that it is unclear if there are any single fathers with young children that need help. One of the team managers says that they are focused on what they think is important but that there is a risk that they have a blind spot for other things that also might be important.

Another problem concerns the facility the dashboard offers to match clients with vacancies. Some work coaches mention that employers often have specific ideas about what kind of employees they want. For example, for a physically demanding work in the port of Rotterdam they want men between 27 and 35. For jobs in healthcare they are often looking for women without children because they are available outside working hours. Even though it is not allowed to mention age or gender in a job description, work coaches know what kind of employee employers are looking for. Work coaches comply with these wishes because if potential employees do not fit the profile of the employer someone will not get hired and it will also become more difficult to match clients with this employer in the future. They thus make pragmatic decisions that help the employers, themselves and the clients that match the profiles. There is no time nor opportunity for a wider reflection and discussion on the way the nature of the dashboard information and its everyday practical usage excludes clients not fulfilling the limited and sometimes arbitrary criteria of employers.

Despite the above concerns shared by a minority of respondents, most respondents do not concern themselves with representational issues. They primarily view the dashboard as a supporting tool that has a signal function and is used to discuss things that stand out.

6. Conclusion and Discussion

The goal of this research was to explore how the use of a data dashboard reshapes the role identities, work practices, and norms of appropriate behavior of frontline bureaucrats in social domain in Rotterdam. First, we found two categories of role identities among work coaches, (a) the client coach, and (b) the caseload manager. With the implementation of the dashboard the organizational tasks that were previously the responsibility of team managers, such as caseload management, are being distributed to frontline bureaucrats. This leads to role conflicts for work coaches that have a client coach role identity because these new tasks do not fit with their core focus on personal contact with clients. Furthermore, we established that the filling of the institutional void in which the introduction of the dashboard takes place, is centered around three themes of contestation concerning the norms of appropriate behavior around the use of the dashboard (a) data quality, (b) quality of service provision, and (c) data representations.

The diverse reactions toward the dashboard indicates that implementation of data tools is not merely a politically neutral implementation of a technical objective tool. The discussions between caseload managers and client coaches represent the broader societal debate between dataists and relationshipists played out at the frontline. The dashboard in its current form does not fully live up to its neo-liberal efficiency promise of “doing more with less.” Work coaches with a caseload manager identity experience a feeling of control over their caseload, but not all work coaches experience more efficiency in their work. Moreover, learning to work with the dashboard and the registration that comes with ensuring the data quality takes up a lot of time. In the perception of work coaches with a client coach identity, this comes at the cost of personal contact with clients. Furthermore, work coaches in specialized teams reject the efficiency promise of “doing more with less” altogether because of its quantitative evaluation of performance. Their resistance to the dashboard arises from their perception that data-driven approaches are inadequate in solving complex cases.

The discussions about the norms of appropriate behavior around the use of the dashboard with regards to data quality, the quality of service provision, and representational issues also logically stem from the broader societal debate between neo-liberal dataists and the more critical approach of relationshipists. The discussion about the question if data quality says anything about the quality of service provision indicates that there is disagreement about if data can translate the complexities of the real world into ordered forms of knowledge. Quality officers and work coaches with a client coach identity argue, in line with the more critical approach of relationshipists, that even if all the data are complete and correct it does not necessarily say anything about the quality of the service provision. Managers and work coaches with a caseload manager identity argue in line with dataists that good data quality is necessary for making the dashboard an effective tool.

Furthermore, from the discussion about the representational issues with the dashboard it becomes clear that the core assumption of dataists that blind spots of human judgment such as personal prejudice will be remedied by data tools does not hold. In our study, team managers warn for tunnel vision due to the use of the data dashboard as some groups become more visible than others. The (in)visibility of certain groups in the dashboard is a perfect example of “ontic occlusion” where the act of admitting certain data is at the same time an act of excluding other data. One representation of an idea, situation, or event can take precedence and occlude, or block, another representation (Knobel, 2010; Kitchin, 2017). In our case single mothers with young children are a visible group in the dashboard that get the help they need. Other groups, like single fathers with young children are less visible in the dashboard. Groups that do not get the help they need will have more difficulties finding a job, and the longer they are unemployed the more difficult it is to get back to work at all. This shows that the dashboard can potentially have a performative nature because it does not merely describe reality but creates and defines reality (Danaher et al., 2017, p. 5; Kitchin, 2017; Zook, 2017). Decisions about what characteristics of clients are included in the dashboard

influences how the dashboard represents reality. The control over gathering and selecting data is a key locus of power and whoever gets to decide this occupies an authoritative position (Zook and Graham, 2007a, b; Beer, 2016; Zook, 2017; Cobham, 2020; Kitchin, 2021). The process manager, the team managers and the data-driven improvement teams have most control over what data is gathered and selected, and therefore have an authoritative position. These are also the people who have a strong caseload manager identity. It is more difficult for a regular work coach with a client coach identity to have influence on what data are gathered and selected. This represents a power struggle between dataists and relationshipists played out at the frontline. This moreover shows that the dashboard is not a neutral tool but has performative and political intervention in the frontline.

Given the initial expectation of some scholars (Pederson, 2019) that dataism is likely to prevail in the digital welfare state, the outcomes of our study are relevant for academia and society.

With regards to academia, our outcomes add to existing knowledge about the meaning of data-driven work for frontline bureaucrats. The findings demonstrate that the introduction of data tools poses a particular problem for frontline bureaucrats because their work takes place at the intersection of the system world of the public sector and the life world of ordinary citizens on benefits. While the data tools are introduced and legitimated as an effort to enhance the quality of service provision, the practical consequence, as our research shows, is that work coaches with a client coach identity perceive that the dashboard comes at the expense of personal contact with clients. Moreover, they perceive being pulled into system directions which inhibits them from connect to life world considerations of citizens needing help.

The societal relevance of our research lies in the new research questions it throws up pertaining to the articulation of the dashboard practices with the experiences of the people dependent on the system. If clients notice that their work coaches are now using a dashboard is presently unclear. How they could benefit is, as a result, a story of bureaucratic imagination rather than an empirical fact. It is here, evidently, that the proof of the pudding of data-driven work is in the eating: how do citizens benefit from data-driven systems, do all citizens benefit or suffer in the same way, do these systems address their own concerns at all? These are the core questions for frontline bureaucrats, regardless of their role identity, and it is with this framework that data systems need to be designed, implemented, and assessed.

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